

FEBRUARY 2012
QUARTERLY COMMODITY INSIGHTS
BULLETIN



cutting through complexity

Q4 – 2011

Platinum

Wayne Jansen

Commodity lead – Platinum

KPMG in South Africa

E: wayne.jansen@kpmg.co.za

Commodity outlook

A faster than expected recovery in Japanese demand and threat of industrial strike action in South Africa's supply helped in increasing prices in August 2011. But the last quarter of 2011 saw escalation of the Eurozone sovereign debt crisis which reduced prices substantially.

The outlook for demand in 2012 (increasing to 6.8 Moz from 6.3 Moz in 2011) is modest given the Chinese slowdown, Eurozone recession and swing towards palladium substitution. Unexpected supply constraints and investor activity will however continue to strongly impact pricing.

As per consensus estimates, platinum prices are expected to average ~US\$1,640 in 2012 and ~US\$1,750 in 2013.

Figure 1: Platinum price forecasts

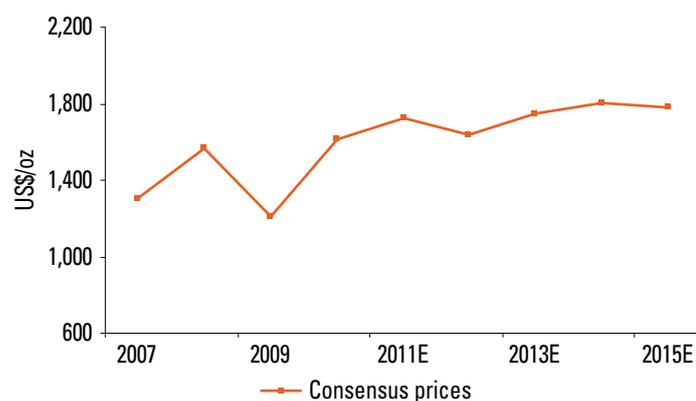


Table 1: Platinum production 2011 vs 2010

Production	South Africa	Russia	North America	Zimbabwe	Others	Total
In koz (2011E)	4,775	825	360	335	100	6,395
In % (2011E)	74.7%	12.9%	5.6%	5.2%	1.7%	
In koz (2010)	4,635	825	210	280	110	6,060
In % (2010)	76.5%	13.6%	3.5%	4.6%	1.8%	

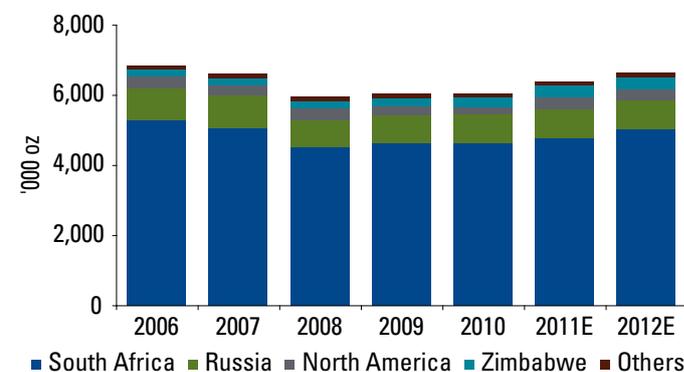
Source: SFA (Oxford), HSBC, KPMG Analysis

¹ SFA (Oxford)



Supply and demand

Figure 2: Platinum supply, 2006–12F



Source: Johnson Matthey, HSBC, KPMG analysis

South Africa

South Africa plays a significant role in the world's output of platinum contributing around 77% of the total in 2010.¹

The country's significance was evidenced in 2008 when due to power shortages, production cuts in the platinum industry raised prices to an all time high of US\$2,300/oz.

Consequently a key constraint for growth is security of power supply with increased capacity from the local power utility Eskom only becoming available in the next few years. The electricity demand and supply balance is expected to be marginal over the next two years with some producers looking at alternative sources of power production to address this need and provide security of supply. The cost of power has also increased substantially (refer Figure 3) as Eskom embarks on a significant capital expenditure program to address the country's increased power requirements.

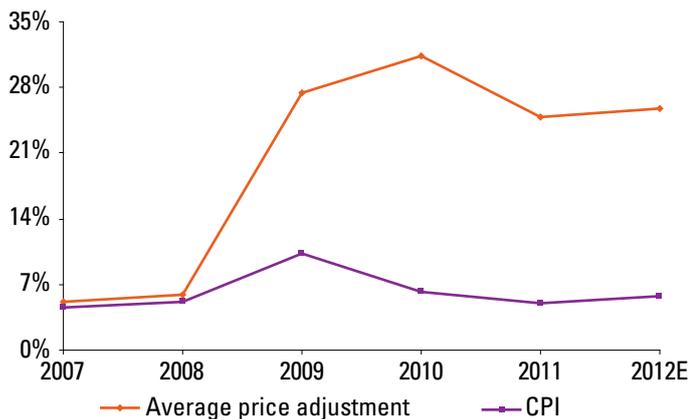
Another key operating challenge impacting the local Platinum Group Metals (PGM) producers is the industry's safety record.

Mandatory Section 54 stoppages have increased in number and have become longer in duration.

There have also been concerns over mine nationalisation in South Africa for some time. Mine nationalisation was recently officially rejected by the South African Government following an internal review with more emphasis now being placed on a higher tax regime and more state intervention.

Per official production data and stated company objectives, HSBC estimates South African production to be at 4.80Moz in 2011 and forecasts it to reach 5.04Moz in 2012.

Figure 3: Price increases in electricity tariffs



Source: Eskom, KPMG analysis

Russia

Russia contributed ~14% of the total platinum production in 2010² with production recovering 5% in 2010, from a decade low of 785,000 oz in 2009, to 825,000 oz. A decline is however expected in production on grounds of lower grades.

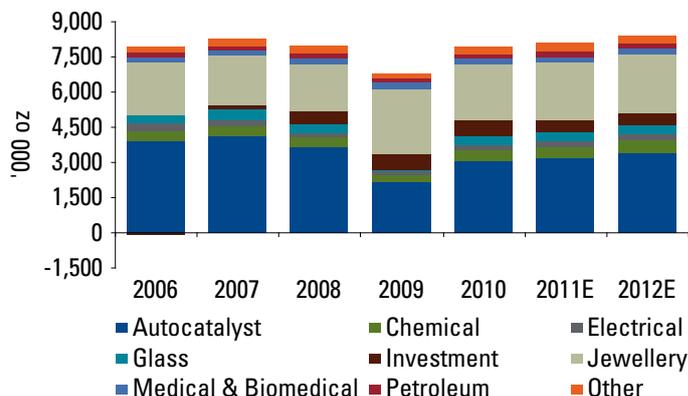
Zimbabwe

Production in Zimbabwe accounted for ~5% of global platinum production in 2010³ with production growth seen at a CAGR of 12.6% from 155,000 oz in 2005 to 280,000 oz in 2010. With a few more expansions under way, output is expected to increase further. There is, however, still investment concern over a local law introduced requiring indigenous Zimbabweans to hold a majority of ownership in all local operations.

North America

North America contributed ~4% of global platinum production in 2010.⁴ Long strikes at Vale's Sudbury operations hampered production with output down to 210,000 oz in 2010 from an average of 330,000 oz between 2006 and 2008. Output has recovered following the end of the industrial strike and with idle capacity restarting, production is expected to reach its original levels in the coming years.

Figure 4: Platinum global demand, 2006-12F



Source: Johnson Matthey, HSBC, KPMG analysis

Auto demand

Auto demand plays an important role in physical demand of platinum globally and in 2011 represented 48% of global demand.⁵ The Japanese earthquake and tsunami resulted in reduced output for auto in 2011 but an earlier than expected recovery and higher sales of diesel cars in US, brought back the production levels for auto and auto parts and the demand for platinum. As per a Bloomberg article, about 3.82Moz of platinum is expected to be used as auto catalysts in 2012 up 17 percent year on year. However platinum demand in the auto industry is currently facing downward pressure from lesser sales in Europe due to the Eurozone crisis and also continuous pressure from cheaper substitute palladium.

An upcoming growth area for platinum demand is fuel cell technology which can help in providing clean, reliable and cost effective energy. According to AngloAmerican Platinum, the prioritized development of this sector by the South African Government can help in achieving local beneficiation and clean energy programmes. As per SBI Energy Research, the fuel cell market is expected to reach US\$1.2Bn by 2014 from US\$598Mn in 2010 at a CAGR of 20% p.a. Fuel cell vehicles are also expected to drive this demand with hydrogen fuel-cell vehicles already available on a limited retail basis and other auto manufacturers planning to launch vehicles in the next two years.

For more information on automotive sector views and trends, refer to our report "Global Automotive Executive Survey 2012" published on 5th January, 2012.

Jewellery

Demand for jewellery represented 26% of global platinum demand in 2011.⁶ It has historically been highly price elastic. Low prices in late 2008 and 2009 saw a notable rise in the demand for platinum jewellery whereas higher prices in 2010 resulted in a considerable fall. As per Johnson Matthey, the demand for platinum jewellery is expected to grow at 4% for 2012 because of higher Chinese demand.

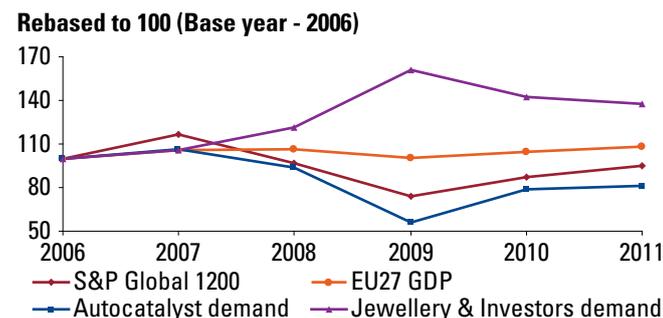
^{2,3,4,5,6} SFA (Oxford)

Industrial demand

As per ScotiaMocatta report, industrial demand for platinum from growth industries like glass, electronics, petroleum and chemical industries remains sedate even where there is an economic slowdown (unlike the auto industry). Thus demand is expected to grow at a stable pace in the coming years.

A general trend has been for jewellery manufacturers and investors to increase their demand when auto demand reduces and vice versa. Demand has been swinging from one factor to another on the basis of macroeconomic conditions prevailing, keeping a balance on the overall demand for platinum. (Refer Figure 5).

Figure 5: Platinum demand trend



Source: S&P Indices, European Central Bank, Johnson Matthey, KPMG Analysis
S&P Global 1200 and EU27 GDP are used as macroeconomic indicators, Autocatalyst, jewellery and investors demand is for platinum

Table 1: Platinum deals announced in Q4 2011

Date announced	Target	Target nation	Acquirer	Acquirer nation	Seller	Status	Value of transaction (US\$ million)	Stake (%)
October 3, 2011	Western Platinum Limited	South Africa	Shanduka Group Pty Ltd	South Africa	Lonmin Plc	Incomplete	139.25	50%

Source: Merger Markets, Company reports, KPMG Analysis

Regulatory Updates

In Q4 2011, regulations introduced related to increasing the revenue base for Government as well as employment capabilities in the sector and stricter control over mining activities. The controls are being implemented to retain and provide benefits of non-renewable resources to the welfare of local communities.

Table 2: List of recent regulations regarding platinum industry

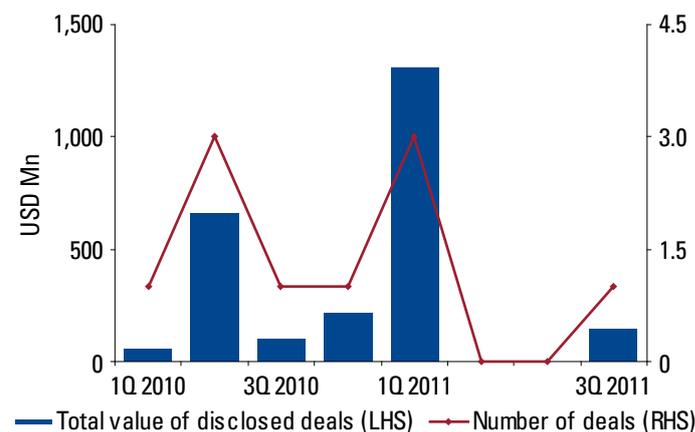
Country	Regulation	Description
Zimbabwe	Drafting new mining laws	Zimbabwean Mines and Mining Development Minister Obert Mpofu is considering drafting laws to require platinum mining companies to set up refineries
Zimbabwe	Drafting new mining laws	Zimbabwean Deputy Mines Minister Gift Chimanihire has stated that a ban on unrefined platinum exports could be introduced next year
South Africa	Mineral & Petroleum Resources Development Act	South Africa's Mineral Resources Minister Susan Shabangu is planning to reform the mining regulatory system to conform with international mining best practices

Key developments

Ownership changes

In the fourth quarter of 2011, the total value of announced deals in the platinum industry was US\$139 million, down from US\$215 million in the fourth quarter of 2010. The Shanduka group acquired control of the Limpopo assets of Messina Platinum Mines, a wholly owned subsidiary of Lonmin Plc's Western Platinum Limited. This will give Shanduka, a black empowerment group, entry into the platinum producing segment.

Figure 6: Value of deals disclosed in platinum industry



Source: Merger Market, KPMG Analysis

Future projects

Table 3: Major Greenfield platinum projects

Project	Country/Region	Operators	Capex (US\$M)	Steady State	Capacity
Twickenham Platinum Mine	South Africa	AngloAmerican Platinum	-	2019	3Mtpa
Unki Platinum Mine	Great Dyke, Zimbabwe	AngloAmerican Platinum	-	2013	1.44Mtpa
Frischgewaagd-Ledig project	Bushveld, South Africa	Wesizwe/ Jinchuan	800	2018	340koz 4E
Western Bushveld Project #1	South Africa	Platinum Group Metals Ltd	443	2014	275koz 4E

Source: Company data, KPMG analysis

Table 4: Major Brownfield platinum projects

Project	Country/Region	Operators	Capex (US\$M)	Steady State	Capacity
Zimplats (Phase 2)	Zimbabwe	Impala Platinum	460	2013	90koz 4E
Impala Rustenburg (Replacement of shafts)	South Africa	Impala Platinum	-	2017	40koz 4E
The Thembelani Merensky replacement project	Rustenburg, South Africa	AngloAmerican Platinum	-	2015	-
Styldrift Project	Bushveld, South Africa	Royal Bafokeng / Anglo American Platinum	1,500	2016	220koz 4E
Marikana Expansion	Bushveld, South Africa	Lonmin	1,300	2015	250koz 4E

Source: Company data, KPMG analysis